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lime, which they polish with pumice-stone when dry.

There may be some circumstances in which this composition may be used, in the place of and with rather less expense than some others, such as for covering exterior plaster work, where there is less inconvenience in laying a thick coat to preserve soft brick from injury by rain, and to give it the appearance of stone.

It is with this view that we can recommend it for trial.

Meteoric Stones.

In consequence of two recent falls of meteoric stones in France, and the recurrence of accurate observations of these phenomena, we feel it respectful to public curiosity to make some observations on the subject. Till within a few years, philosophers were incredulous in regard to the alleged facts, and they classed the reported falls of stones among the feats of witchcraft and the miracles of priestcraft; but the fact is now not only incontrovertible, but specimens of the stones are to be seen in our mineralogical cabinets, and above an hundred instances are recorded of their falls in different parts of the world. Various hypotheses have of course been announced by chemists and naturalists to account for such interesting phenomena. Some have supposed them to be projections from volcanoes in the Moon, others have ascribed them to projections from volcanoes on the Earth, while many have considered them as fragments of broken planets, circulating in the solar system, of which the *asteriods* are visible portions. The compass of a paragraph does not enable us to demonstrate all the absurdities of these hypotheses, arising from the improbability of any projections of the moon, or broken planets, falling in latitudes much higher than the Tropics, and from the inadequacy of terrestial projections, to the varied phenomena; nor is such a detail necessary, while it is so easy to reduce them to the level of ordinary nature. The power of the atmosphere to hold in solution, or to sustain, every thing which can assume the gaseous form, and the mechanical effects of currents in suspending pulverized substances like the sands of the African deserts, are well known. One result of this power we daily witness, in the infinitely varied appearances of the Aqueous Vapours, which exhibit under different circumstances of heat, electricity, atmospheric currents and density, the phenomena of dews, mists, fogs, clouds of various forms, and classes, condensations in rain, concretions in hail, crystallizations in snow, with whirlpools, &c. &c. Yet it is well known, that aqueous vapours form but a portion, perhaps indeed but an inconsiderable portion of the gaseous and volatile matters taken up by the atmosphere; and that all gases, or vapours, which are lighter than aqueous vapour, must ascend higher in the atmosphere and take their stations according to their specific gravities, lying or seeking to lie, like the coats of an onion, or the strata of the earth. Ought it then to be matter of wonder that these gaseous, decompounded, and volatilized matters produce their peculiar varieties of phenomena? Do we hourly witness without surprize a score of distinct productions of the aqueous vapours, and yet do we wonder at the igneous phenomena which result from the inflammable gases, and from their combinations with all the other bodies floating in and above our atmosphere? Can we suppose that they are exempt from fluctuations of the different regions more than the aqueous vapours? Can it be believed that variations of heat, of electricity, of density, of currents, act less sensibly on the volatilized vapours, and powerful chemical gases, than on the vapours of the sea? Do we not know from experiments, that they are more powerful, more subtle, their mutual actions even more striking, and their results more unexpected? Does not their mixture in our laboratories produce many concrete substances? Do they not severally hold in solution the materials of the aerolites, and frequently deposite them on explosion, or on union with other gases? And would not these chemical affinities and unions produce, in the upper regions of the atmosphere, variations of density which would often subject them to the accelerated motion of falling bodies; under different circumstances, combinations and arrangements, so as to produce the varied phenomena of shooting stars, moving diagonally between the two forces of increasing weight and increasing atmospheric resistance; of ponderous meteors or exploding trains, which traverse, with the mechanical action of fire-works, extensive portions of the atmosphere; and of aerolites produced by the union and detonation of gases, and their fortuitous and simultaneous union with other foreign bodies? It is true, that we may for ages remain as ignorant of the particular modes in which these several phenomena are produced, as we are of the precise mechanical agency which changes aqueous vapour into hail or snow; yet, on that account, we ought to refer less to the inflammable gases, and to the volatility of decompounded substances, for the sources of various igneous meteors, than to the decompositions of water for the known aqueous meteors of hail and snow. It is, however, not less satisfactory to ascertain generally the natural causes which are appropriate in their nature, and commensurate in their powers with these phenomena. Philosophically speaking, our inquiries ought not to terminate till they have ascertained the precise circumstances which produce each set of appearances; but we know enough to protect us from the vagaries of superstition and fanciful hypotheses, in thus establishing the analogical powers of aqueous and of inflammable gases, to the production of their peculiar sets of aqueous and igneous meteors.

(Phillips' Monthly Magazine.)

Gas Lights.

The commencement of the present winter has been distinguished in London by very general preparations for the introduction of gas lights. Nearly the entire line of shops in the main streets, from Shoreditch church, by St. Paul's to Westminster Abbey, a length of more than three miles, either is provided with pipes and lighted by gas, or is in course of preparation. An accurate experiment which we have made on the street gas light, and the street oil lamps, proves, that one gas lamp gives an intensity of light equal to thirty oil lamps. It is also found, that gas burned in an Argand's lamp, equals two such lamps lighted with oil. In shops, the advantages are a white light nearly equal to day-light, a warmth which supersedes the use of fires, a total absence of smoke, smell, and vapour, and great economy of labour and expense. It appears, that every lamp consumes twenty gallons of gas an hour; and that half a sack, or an hundred weight of coals, produces 250 hours' consumption of one lamp, or 5 hours of 50 lamps. The coke produced in the distillation, is worth about as much as the coal; and the tar and ammonia equal the collateral expenses; so that the gas costs little, if any thing. Besides the Original Company in Westminster, which also has a station in Worship-street, Messrs. Grant, Knight, and Murdoch, have opened a new establishment in Water-lane, Fleet-street, and a third is projected in Southwark, creating by a rivalry of interests that competition which is sure to accelerate the progress of this great discovery. We learn that the new company have contracts already for 1500 shop lamps, 300 of which will be lighted in November: and the original company have contracts of an equal extent, all at 4*l.* per annum per lamp, or 3*d.* per night. Some private establishments have provided themselves with apparatus for generating their own gas; but it is too large and the process too operose for general introduction in that form; though Mr. Ackermann, in the Strand, has made the gas in his own house for three years past, and considers it a convenience above all price. It may be worth while to state, that a gas light apparatus consists of a retort, in which the coal is distilled; of a water tub with a worm, through which the gas is cooled; of a vessel of lime water, by which it is deprived of all smell; and of a copper gasometer, or cubic receptacle, inverted in water for receiving the stock of gas. It may be used at any distance, to which there are pipes to convey it.

(Phillips' Monthly Magazine.)

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